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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,483

07/03/2003

Alan Edward Palmer

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EXAMINER

MCCORMICK, MELENIE LEE

ART UNIT

PAPER NUMBER

1655

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/613,483	<b>Applicant(s)</b> PALMER ET AL.	
	<b>Examiner</b> MELENIE MCCORMICK	<b>Art Unit</b> 1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/09</u>   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicant's remarks with claim amendments submitted 01 April 2009 have been received and considered.

Claims 14-18 have been cancelled. Claims 1-13 are pending and presented for examination on the merits.

### ***Maintained Rejections***

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al. (US 6,063,432) as evidenced by Jones et al. (US 2004/0255074) and wikipedia.org. and in view of Cook et al. (US 4,451,488) for the reasons set forth in the previous Office Action, which are discussed below.

Maxwell et al. beneficially teach a nutritional bar (healthbar) comprising soy protein, the soy protein being in the form of isolates, grits and nuts, which is the major source of protein of the bar (see e.g. col 2, lines 43-53). Maxwell et al. further teach that protein may be present in the bar in a range of about 20-50% by weight (see e.g. claim 1) and that soy protein isolate, soy grits and soy nuts may comprise 7.5-12.5 % by weight each of the total protein, the total protein being in the range of 25-35% by weight.

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It is therefore clear that the that the soy protein isolate, soy grits, and soy nuts are primarily comprised of soy protein (i.e. close to 100% protein). Maxwell also teaches that the bar may contain minerals such as zinc, copper, manganese, chromium and iron (see e.g. col 1, lines 14-15). Although Maxwell does not disclose the protein is in the form of a nuggets, Applicants have disclosed that a nugget has a size anywhere from 4 mm<sup>3</sup> to 35 mm<sup>3</sup> (see instant specification page 6, lines 29032). As evidenced by Jones et al., a small soybean ranges from less than 3 mm to 6 mm in diameter (see e.g. [0039]) and a large soybeans can have a diameter larger than 7 mm (see e.g. [0050]). As evidenced by wikipedia.org, soy nuts are made by soaking soybeans in water and baking them. Thus, a soy nut would be expected to have a similar size as the soybean and be within the size range of the nuggets instantly claimed.

Maxwell et al. does not explicitly teach that the nutritional bar comprises glycerol or that the particular protein ranges instantly claimed are present in the health bar.

Cook et al. teaches a food bar with a long shelf life and good flavor (see e.g. col 1, lines 10-12). Cook et al. further teaches that it is known that high levels of moisture in food generally promote microbiological spoiling and growth of organisms such as yeast, molds, and bacteria (see e.g. col 1, lines 33-36). Cook et al. further teaches that the  $A_w$  (water activity) of the food bar kept below .55 and is in the range of 0.2 -0.55 (see e.g. col 2, lines 43-53). Cook et al. teach that the low water activity of the food bar is provided by the addition of polyhydric alcohols, including glycerol, and provides stability to the product (see e.g. col 2, lines 55-64). Cook et al. further disclose that glycerol is present in the food bar in an amount of about 3% by weight (see e.g. claim 1).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add the humectant glycerol to the food bar taught by Maxwell. A person of ordinary skill in the art at the time the claimed invention was made would have been motivated and would have had a reasonable expectation of success in doing so based upon the disclosure of Cook et al. that glycerol lowers the water activity of food bars, therefore inhibiting the growth of microorganisms and providing greater shelf stability. A person of ordinary skill in the art would therefore recognize this beneficial effect of glycerol and would be motivated to include it in the food bar taught by Maxwell et al. A person of ordinary skill in the art would have been motivated to optimize the amount of protein in the food bar taught by Maxwell et al. depending upon the nutritional needs of those it was intended for.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al. (US 6,063,432) as evidenced by Jones et al. (US 2004/0255074) and wikipedia.org. in view of Cook et al. (US 4,451,488), further in view of Nanbu et al. (US 6,074,675) for the reasons set forth in the previous Office Action, which are presented below.

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Maxwell et al. and Cook et al. teach a nutritional food bar comprising soy protein nuggets, transition minerals and glycerol and are relied upon for the reasons set forth above.

Maxwell et al. and Cook et al. do not explicitly teach that the minerals are substantially water insoluble at 20°C.

Nanbu et al. teach a mineral composition and a food which comprises the mineral composition (see e.g. col 1, lines 10-15). Nanbu et al. teach that minerals such as iron and zinc are water insoluble. (see e.g. col 5, lines 44-47).

A person of ordinary skill in the art would have reasonably understood, based upon the disclosure of Nanbu et al., that the transition metals, particularly iron and zinc, would be water insoluble at room temperature (20°C). Although the particular temperature is not disclosed by Nanbu et al., a person of ordinary skill in the art would not expect the solubility to be increased at room temperature and would therefore realize that zinc and iron would be water insoluble at room temperature.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Claims 1-11 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al. (US 6,063,432) as evidenced by Jones et al. (US 2004/0255074) and wikipedia.org. in view of Cook et al. (US 4,451,488), Nanbu et al. (US 6,074,675), further in view of Leusner et al. (US 6,468,568) and El Nokaly (US 5,215,757) for the reasons set forth in the previous Office Action, which are discussed below.

Maxwell et al. and Cook et al. teach a nutritional food bar comprising soy protein nuggets, transition minerals and glycerol and are relied upon for the reasons set forth above.

Nanbu further teaches that the iron used in the food composition may be in the form of ferric oxide, iron carbonate, and ferrous phosphate (see e.g. col 5, lines 57-59).

Maxwell et al. and Cook et al. do not explicitly teach that the transition metal is substantially encapsulated in an encapsulation material or that the encapsulation material comprises alginate.

Leusner et al. teach that encapsulation of minerals in foods allows the mineral content of foods to be increased without substantially affecting the taste of the food (see e.g. col 7, lines 60-67).

El Nokaly teaches that a polysaccharide liquid crystal can be made to encapsulate and deliver nutrients such as minerals to foods (see e.g. col 1, lines 13-15). El Nokaly further teaches that the minerals may include manganese, iron, zinc and copper (see e.g. col 11, lines 10-20). El Nokaly further teaches that the polysaccharide can be alginate (see e.g. claim 8).

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It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to encapsulate the minerals in the food bar taught by Maxwell. A person of ordinary skill in the art would have had a reasonable expectation of success in doing so based upon the disclosure of Leusner et al. that encapsulation of minerals in foods allows the mineral content of foods to be increased without substantially affecting the taste of the food. Therefore, the benefit of encapsulation of minerals in a food bar would have been clear to a person of ordinary skill in the art at the time the claimed invention was made. A person of ordinary skill in the art would have further been motivated to use a polysaccharide such as an alginate as the encapsulation material based upon the disclosure of El Nokaly that alginate is used as an encapsulation material for minerals, including manganese, iron, zinc and copper. A person of ordinary skill in the art would have also reasonably understood, based upon the disclosure of Nanbu et al. , that iron could be used in a food bar such as that taught by Maxwell in the form of ferric oxide, iron carbonate, and ferrous phosphate. This is because Nanbu et al. is also using iron in these forms in a food composition. It would therefore be clear that these forms of iron are options for use in food compositions.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.



### ***Response to Arguments***

Applicants argue that the soy nuggets and soy grits disclosed by Maxwell are not primarily composed of protein. Applicants have provided a reference that teaches that soy grits and soy nuts have a protein content of about 35%, not 100% protein. While this reference discloses that the soy nut in the reference had a protein content of about 35%, this it does not overcome the disclosure of Maxwell et al. that there is a total protein content of 25%-35% in a health bar, wherein the soy protein isolate, soy grits, and soy nuts are 7.5-12% by weight each in the bar (see e.g. col 4, lines 32-49). There is no other protein source disclosed other than the three soy components. Therefore, the source of this 25-35% must be the three soy components, which are each present in amounts from 7.5-12% by weight. This would mean that each of these components is comprised primarily of protein, since together their total weight is nearly the same as the total protein content of the bar. In addition, although Applicants argue that soy protein isolate cannot read on the nuggets claimed, it is noted that the claims do not particularly limit the size of the nugget. Therefore, as broadly interpreted, it is possible for the soy protein isolate to read on a nugget, since it is a smaller piece, or unit of soy. This is evidenced by Answers.com, which defines a nugget as a small compact portion or unit (see page 1).

The rejections are therefore deemed proper and are maintained.

### ***Conclusion***

No claim is allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELENIE MCCORMICK whose telephone number is (571)272-8037. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MM

/Christopher R. Tate/  
Primary Examiner, Art Unit 1655